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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,724	08/05/2003	Kiichiro Nishina	241187US2	5701
22850	7590	09/20/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			SCHWARTZ, JORDAN MARC	
			ART UNIT	PAPER NUMBER
			2873	

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/633,724

Applicant(s)

NISHINA, KIICHIRO

Examiner

Jordan M. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9,10 and 12-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,9,10 and 12-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

In the Information Disclosure Statement received October 30, 2003, applicant listed "related applications" but has not complied with the requirements of MPEP 1.98 and therefore these listed applications have not been considered. Specifically, applicant is required to provide copies of any cited U.S. applications for consideration in compliance with 1.98(a)(2)(iii). Applicant, in the arguments of June 24, 2004 stated that a copy of the first listed application had previously been submitted. The examiner could not find this copy and therefore it is suggested that if applicant wants this application to be considered, it should be resubmitted.

Claim Rejections - 35 USC § 112

Claims 1, 19 and 29 (and dependent claims 4-7, 9-10, 12, 17-18 and 20) are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the third lens group having a positive refracting power, does not reasonably provide enablement for the third lens group having a positive reflecting power. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. For purposes of examination the assumed meaning is "refracting power".

Claims 14, 16, 18, 21, and 23-24 (and dependent claims 22 and 25-28) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 14, 16, 18, applicant is claiming “at least one surface of a fourth lens as aspherical” and, while applicant has claimed lens groups sequentially arranged in order, applicant has not claimed any lenses in order from the object side. It is not clear if the claimed “fourth lens” is required to be the fourth most lens from the object side within the lens system, if “fourth lens” means that it is the fourth most lens from the object side of the claimed “at least five lenses” (the assumed meaning), if applicant is using the term “fourth lens” to mean a lens within the claimed fourth lens group or if some other meaning is intended and the lack of clarity renders the claim vague and indefinite.

With respect to claims 21 and 23-24, applicant is claiming “an aperture stop disposed between the second and third lens groups” and “the fourth lens group including...” but has not claimed these lens groups in order from the object side and therefore it is not clear if a specific order of the lens groups was intended as a limitation or if applicant is using the terms “second”, “third” and “fourth” merely to differentiate between different lens groups. The lack of clarity renders the claims vague and indefinite. For purposes of examination the assumed meaning is that a first, second, third, and fourth lens group are sequentially arranged from the object side.

With further respect to claims 21 and 23-24, applicant is claiming the fourth lens group “comprising a positive meniscus fifth lens”, however, applicant has not claimed any lenses in order from the object side. It is not clear if the claimed “fifth lens” is required to be the fifth most lens from the object side within the lens system, if “fifth lens” means that it is the fifth most lens from the object side of the claimed “at least five

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lenses" (the assumed meaning), or if some other meaning is intended and the lack of clarity renders the claim vague and indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 4-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Sato patent number 6,445,513.

Sato reads on these claims by disclosing the limitations therein including the following: first, second, third, and fourth lens groups including at least five lenses sequentially arranged from an object side (Figure 4 re "L1" as the first lens group, "L2" as the second lens group, "L3-L4" as the third lens group, and "L5" as the fourth lens group); the first lens group having a positive power (Figure 4 and Table of Figure 5A re lens "L1"); the second lens unit as negative (Figure 4 and the Table of Figure 5a re "L2"); the third lens having positive power and including a third and fourth lens cemented to each other (Figure 4 and Table 5a re lenses "L3-L4"); the fourth lens group including a positive meniscus fifth lens convex to the object side (Figure 4 and Table 5a

re lens "L5"); an aspherical surface on a surface of the five lenses (Figure 5b); and an aperture stop between the second and third lens groups (Figure 4). That part of the claim stating, "for reading an original" is set forth in the preamble and has not been given patentable weight. Furthermore, stating "for reading an original" goes to the intended use of the lens system. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Sato further discloses the third lens as negative (Figure 4, Table 5a, "L3") and the fourth lens as positive (Figure 4, Table 5a, "L4"). Since applicant has not claimed the third and fourth lenses in any order then Sato further discloses the third lens as positive (Figure 4, Table 5a, "L4" as the claimed "third lens"); and the fourth lens as negative (Figure 4, Table 5a, "L3" as the claimed "fourth lens").

Claims 3 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohtake et al patent number 5,528,428.

Ohtake reads on these claims by disclosing the limitations therein including the following: first, second, third, and fourth lens groups including at least five lenses and including at least two positive and two negative lenses sequentially arranged from an object side (Figure 1 and Table 1 re "L1" as the first lens group, "L2" as the second lens group, "L3" as the third lens group, and "L4" as the fourth lens group); an aspherical surface on one of the five lenses (column 14, line 61); the second lens group having a cemented lens which includes a positive and negative lens (Figure 1 and Table 1 re

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"L1"); an aperture stop between the second third lens groups (Figure 1); at least one surface of the fourth lens is an aspherical surface (column 14, line 61 to column 15, line 2).

That part of the claim stating, "for reading an original" is set forth in the preamble and has not been given patentable weight. Furthermore, stating "for reading an original" goes to the intended use of the lens system. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex pane Masham, 2 USPQ2d 1647 (1987).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda patent number 5,731,915 in view of Huang patent number 6,490,102.

Noda discloses the limitations therein including the following: a lens for reading an original (column 1, lines 11-28 and line 58); comprising first, second, third and fourth lens groups including at least five lenses and including at least two positive and two negative lenses, sequentially arranged from an object side (Figure 1, Tables 1-7, column 2, line 60 to column 3, line 20); the second lens group having a cemented

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lens including a positive and negative lens (Figure 1, Tables 1-7, column 2, line 60 to column 3, line 20 re elements "L2-L3"); an aperture stop between the second and third lens groups (Figure 1); the first lens group comprising a first positive lens (Figure 1, Tables 1-7, column 2, line 60 to column 3, line 20 re "L1"); the second lens group having a negative power and comprising a cemented positive and negative lens (Figure 1, Tables 1-7, column 2, line 60 to column 3, line 20 re "L2-L3"); the third lens group comprising a negative lens (Figure 1, Tables 1-7, column 2, line 60 to column 3, line 20 re "L4"); and the fourth lens group comprising a positive lens (Figure 1, Tables 1-7, column 2, line 60 to column 3, line 20 re "L5"); and satisfaction of the conditions of claim 15 (Figure 1, Tables 1-7, column 2, line 60 to column 3, line 20).

Noda discloses as is set forth above but does not specifically disclose the lens system comprising an aspherical surface. Huang teaches that in an optical system designed for use in an image reading device (abstract) that it is desirable to include an aspherical surface within the lens system to provide improved aberration correction (column 1, lines 33-37). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the reading lens system of Noda as further including an aspherical surface since Huang teaches that in an optical system designed for use in an image reading device that it is desirable to include an aspherical surface within the lens system to provide improved aberration correction.

Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato patent number 6,445,513.

Sato discloses as is set forth above including that glass lenses are preferential when optical performance is emphasized and plastic is preferential when costs and productivity as emphasized (column 1, lines 43-46) but do not specifically disclose the aspherical surface formed by a glass mold. The examiner takes Judicial Notice that it is well known in the art of lenses to form lenses, including aspherical lenses, by glass molding for the purpose of providing the means of producing the aspherical lens. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have all of the lenses of Sato as formed by glass and the aspherical surfaces by glass molding since Sato teaches that glass is preferential for the purpose of providing improved optical performance and since it is well known in the art of lenses to form lenses, including aspherical lenses, by glass molding for the purpose of providing the means of producing the aspherical lens.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato patent number 4,390,251.

Kato discloses the limitations therein including the following: first, second, third, and fourth lens groups including at least five lenses sequentially arranged from an object side (Figure 1a and Embodiment 1 re "R3-R4" as the first lens group, "R5-R6" as the second lens group, "R7-R9" as the third lens group, and "R10-R11" as the fourth lens group); the first lens group having a positive power (Figure 1a and embodiment 1 re lens "R3-R4"); the second lens unit as negative (Figure 1a and embodiment 1 re lens "R5-R6"); the third lens having positive power and including a third and fourth lens cemented to each other (Figure 1a and embodiment 1 re lens "R7-R9"); the fourth lens

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group including a positive meniscus fifth lens concave to the object side (Figure 1a and embodiment 1 re lens "R7-R9"); and an aperture stop between the second and third lens groups (Figure 1). That part of the claim stating, "for reading an original" is set forth in the preamble and has not been given patentable weight. Furthermore, stating "for reading an original" goes to the intended use of the lens system. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex pane Masham, 2 USPQ2d 1647 (1987). Kato discloses as is set forth above but does not disclose an aspherical lens. The examiner takes Judicial Notice that it is well known in the art of optical systems for such systems to include the use of aspherical lenses for the purpose of providing improved aberration correction. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the lens system of Kato as including an aspherical surface since it is well known in the art of optical systems for such systems to include the use of aspherical lenses for the purpose of providing improved aberration correction.

Allowable Subject Matter

Claims 6-7, 9-10, 12, 16, 20, 22 and 25-28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 19, 21, and 23-24 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: with respect to the allowable subject matter, none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103. Specifically, with reference to claims 6 and 9-10, none of the prior art either alone or in combination, disclose or teach of the claimed lens for reading specifically including, as the distinguishing feature in combination with the other limitations, the claimed first lens having an aspherical surface. Specifically, with reference to claim 7, none of the prior art either alone or in combination, disclose or teach of the claimed lens for reading specifically including, as the distinguishing feature in combination with the other limitations, the claimed fifth lens as a negative lens. Specifically, with reference to claim 12, none of the prior art either alone or in combination, disclose or teach of the claimed lens for reading specifically including, as the distinguishing feature in combination with the other limitations, the satisfaction of the claimed conditions. Specifically, with reference to claim 16, none of the prior art either alone or in combination, disclose or teach of the claimed lens for reading specifically including, as the distinguishing feature in combination with the other limitations, the claimed fourth lens having an aspherical surface. Specifically, with reference to claims 19-20, none of the prior art either alone or in combination, disclose or teach of the claimed lens for reading specifically including, as the distinguishing feature in

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combination with the other limitations, the claimed illuminating the original in a slit like shape, imaging by reducing a reflected light portion on a light sensor by the claimed lens for reading, and reading an original by illuminating and scanning a surface.

Specifically, with reference to claims 21-28, none of the prior art either alone or in combination, disclose or teach of the claimed lens for reading specifically including, as the distinguishing feature in combination with the other limitations, the claimed image forming lens configured to reduce and image a light reflected on the original and a line sensor to conduct a photoelectric transfer of an original image imaged by the image forming lens.

Response to Arguments

Applicant's arguments with respect to the above rejected claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is (571) 272-2337. The examiner can normally be reached on Monday to Friday (8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached at (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jordan M. Schwartz
Primary Examiner
Art Unit 2873
September 15, 2004